

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Headroom

#### Montana Manufacturing Extension Center

#### HeadRoom Amplifies Production and Net Profit

##### Client Profile:

Headroom Corporation, located in Bozeman, Montana manufactures and sells headphone amplifiers and digital-to-analog converters. Founded in 1992, the company employs 12 people.

##### Situation:

Headroom's manufacturing manager was interested in revamping the production area. He knew improvements were needed and had been working to reduce a large accumulation of old raw materials. However a good part of every day was spent just scheduling work, leaving little time to tackle congested work areas. Some areas were piled high and somewhat impassible; the textiles operation for sewing a variety of products was spread across a large amount of space; one room housed three people and multiple processes including all thru-hole soldering and surface mount operations; testing space was complicated and frustrating; and areas like the urethane molding technology lab were in need of organization. The company contacted the Montana Manufacturing Extension Center (MMEC), a NIST MEP network affiliate, for help.

##### Solution:

MMEC conducted a Lean Manufacturing workshop for the entire Headroom team. The class made it "blatantly obvious what I needed to do," the manufacturing manager said. Lean gave him the knowledge to integrate changes and engage staff. As a result of the training provided by MMEC, the team has implemented effective changes like setting up efficient manufacturing cells, point of use storage, visual WIP (work in progress), and eliminating clutter and unused equipment. Most visibly, the textiles department now takes up half its former space and uses a 'supermarket' of sub-assemblies stored in nearby tubs. The room that formerly housed multiple processes is now organized as a product cell with point-of-use storage, comfortable space and the test equipment for the miniaturized power amplifiers. The use of manufacturing cells has also transformed several other areas. The electronics production area for thru-hole soldering, surface mount finishing and final build is now a small cell adjacent to the work in progress shelving. A room previously piled high and somewhat impassible, is now an organized space to connect and monitor products before they are packaged and ready to sell. Lean Manufacturing applications introduced by MMEP helped Headroom simplify by introducing new tools, showing what they are, where they fit, and how to apply them. Lean awareness has led to standardizing product options, especially as changing technologies have enabled the same high performance in smaller, less expensive models. A key product line, for example, used to have 72 permutations, making it extremely difficult to keep any in stock. Now there are four selections resulting from a study of trends that revealed configurations based on customer demand. The company can now handle new product releases more easily and has reclaimed space for future growth.

##### Results:

## MANUFACTURING EXTENSION PARTNERSHIP

### Success Stories from the Field

- \* Increased sales by 500 percent.
- \* Reduced raw materials inventory by \$100,000.
- \* Reduced lead times from 2-3 weeks to 2-3 days.

**Testimonial:**

"MMEC is a touchstone to a growing understanding of how to do business."

Tyll Hertsens, Founder & CEO